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| 09/989,663 | 11/21/2001 | Jae Yong Park | 041501-5457 | 1777 |

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| EXAMINER | |
|---|---|
| DHARIA, PRABODH M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2673 | |

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/989,663 | Applicant(s) PARK ET AL. | |
|---|---|---|---|
| | Examiner Prabodh M Dharia | Art Unit 2673 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-21* is/are rejected.

7)☒ Claim(s) *5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. **Status:** Receipt is acknowledged of papers submitted on May 03, 2004 under reconsideration, which have been placed of record in the file. Claims 1-21 are pending in this action.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1-4,6-11,13-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (6,522,079 B1) in view of Kijima et al. (6,259,500 B1).

Regarding Claim 1, Yamada teaches an electroluminescence display device (Col. 3, Lines 22,23), comprising: a transparent substrate (Col. 5, Lines 33-43); a plurality of first electrodes formed on the transparent substrate (Col. 5, Lines 44-47); an electroluminescence layer (Col. 5, Lines 34-37) and a plurality of second electrodes (Col. 5, Lines 47-50) sequentially disposed on the first electrodes (Col. 6, Lines 35-49); a packaging plate having a plurality of protrusions formed at a side opposite to the plurality of second electrodes (Col. 5, Lines 44-47, Extends-protrudes); an absorber contained within each protrusion (Col. 1, Lines 35-43, Lines 48-59); a plurality of semi-transparent films disposed on the packaging plate and each absorber; and an adhesive attaching the transparent substrate to the packaging plate to oppose each other (Col. 5, Lines 33-43).

However, Yamada fails to teach specifically an absorber contained with in each protrusion.

However, Kijima et al. teaches specifically an absorber contained with in each protrusion (Col. 11, Lines 38-50, Col. 12, Lines 14-17, Col. 12, Lines 9-13, Semi-transparent, Lines 15-18, packaging plate attached to substrate, Col. 12, Line 65 to Col. 13, Line 3, spacer used as absorber to achieve uniformity in the display surface, Col. 13, Lines 12-14, Col. 4, Lines 40-46, two substrate attached or sealed with an adhesive).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Kijima et al. in Yamada teaching transmission /reflection type LCD device (EL device) having a high display quality without a defective display due to a variation in cell gap.

Regarding Claim 2, Kijima et al. teaches the plurality of first electrodes are arranged in parallel in a line, and the plurality of second electrodes are arranged orthogonal to and cross the plurality of first electrodes (Col. 4, Lines 20-39, Col. 9, Lines 9-32).

Regarding Claim 3, Kijima et al. teaches each of the plurality of first electrodes are disposed in a pixel region of a matrix arrangement (Col. 7, Lines 47,48).

Regarding Claim 4, Kijima et al. teaches the absorber includes a fine powder (Col. 1, Lines 60-66).

Regarding Claim 6; Yamada teaches the packaging plate is formed of canister (Col. 5, Lines 38-43).

Regarding Claim 7, Kijima et al. teaches the plurality of protrusions are formed by molding inner sides of the packaging plate (Col. 11, Lines 51-59).

Regarding Claim 8, Kijima et al. teaches the packaging plate includes one of a glass and plastic material (Col. 1, Lines 57-66, Col. 8, Lines 20-22).

Regarding Claim 9, Kijima et al. teaches the plurality of protrusions are arranged in a matrix configuration pattern (Col. 7, Lines 47,48, Col. 11, Lines 38-50, Col. 12, Lines 14-17, Col. 12, Lines 9-13).

Regarding Claim 10, Kijima et al. teaches each of the plurality of protrusions is formed in one of a circular and square shape (figure 6B, 6C, 6D, Col. 11, Lines 38-59).

Regarding Claim 11, Kijima et al. teaches upper and lower surfaces of the packaging plate are planar (figure 1B, Col. 8, Lines 13-22).

Yamada teaches upper and lower surfaces of the packaging plate are planar (Col. 2, Lines 14-21).

Regarding Claim 13, Yamada teaches an electroluminescence display device (Col. 3, Lines 22,23), that actively drives a plurality of pixel regions (Col. 3, Lines 38-53) defined on a transparent substrate (Col. 5, lines 42,43), comprising: a plurality of switching thin film transistors and light-emitting thin film transistors provided in each of the plurality of pixel regions (Col. 3, Lines 38-53), the electroluminescence display device is connected to the plurality of light-emitting thin film transistors for controlling emission of light (Col. 3, Lines 38-53); a packaging plate having a plurality of protrusions formed at a side opposite to the transparent substrate (Col. 5, Lines 44-47, Extends- protrudes, Col. 1, Lines 35-43, Lines 48-59); an absorber contained within each of the plurality of protrusions(Col. 1, Lines 35-43, Lines 48-59); a semi-transparent film attached to the packaging plate and the absorber; and an adhesive attaching the transparent substrate to the packaging plate to oppose each other (Col. 5, Lines 33-43).

However, Yamada fails to teach specifically an absorber contained with in each protrusion.

However, Kijima et al. teaches specifically an absorber contained with in each protrusion (Col. 11, Lines 38-50, Col. 12, Lines 14-17, Col. 12, Lines 9-13, Semi-transparent, Lines 15-18, packaging plate attached to substrate, Col. 12, Line 65 to Col. 13, Line 3, spacer used as absorber to achieve uniformity in the display surface, Col. 13, Lines 12-14, Col. 4, Lines 40-46, two substrate attached or sealed with an adhesive).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Kijima et al. in Yamada teaching transmission /reflection type LCD

device (EL device) having a high display quality without a defective display due to a variation in cell gap.

Regarding Claim 14, Yamada teaches a plurality of storage capacitors, each connected to a corresponding one of the plurality of switching thin film transistors (Col. 5, Lines 47-50).

Regarding Claim 15, Kijima et al. teaches the absorber includes a fine powder (Col. 1, Lines 60-66).

Regarding Claim 16, Yamada teaches the packaging plate is formed of canister (Col. 5, Lines 38-43).

Regarding Claim 17, Kijima et al. teaches the packaging plate includes one of a glass and plastic material (Col. 1, Lines 57-66, Col. 8, Lines 20-22).

Regarding Claim 18, Kijima et al. teaches upper and lower surfaces of the packaging plate are planar (figure 1B, Col. 8, Lines 13-22).

Yamada teaches upper and lower surfaces of the packaging plate are planar (Col. 2, Lines 14-21).

Regarding Claim 19, Yamada teaches a packaging plate having a plurality of protrusions formed at a side opposite to the transparent substrate (Col. 5, Lines 44-47, Extends- protrudes,

Col. 1, Lines 35-43, Lines 48-59); an absorber contained within each of the plurality of protrusions(Col. 1, Lines 35-43, Lines 48-59); a semi-transparent film attached to the packaging plate and the absorber; and an adhesive attaching the transparent substrate to the packaging plate to oppose each other (Col. 5, Lines 33-43).

However, Yamada fails to teach specifically an absorber contained with in each protrusion.

However, Kijima et al. teaches specifically an absorber contained with in each protrusion (Col. 11, Lines 38-50, Col. 12, Lines 14-17, Col. 12, Lines 9-13, Semi-transparent, Lines 15-18, packaging plate attached to substrate, Col. 12, Line 65 to Col. 13, Line 3, spacer used as absorber to achieve uniformity in the display surface, Col. 13, Lines 12-14, Col. 4, Lines 40-46, two substrate attached or sealed with an adhesive).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Kijima et al. in Yamada teaching transmission /reflection type LCD device (EL device) having a high display quality without a defective display due to a variation in cell gap.

Regarding Claim 20, Yamada teaches upper and lower surfaces of the packaging plate are parallel to an upper surface of the cathode electrode (Col. 3, Lines 38-53, Col. 2, Lines 14-21, Col. 5, Lines 33-43).

Kijima et al. teaches upper and lower surfaces of the packaging plate are parallel or planar (figure 1B, Col. 8, Lines 13-22).

Regarding Claim 21, Kijima et al. teaches each of the plurality of protrusions is formed in one of a circular and square shape (figure 6B, 6C, 6D, Col. 11, Lines 38-59).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (6,522,079 B1) in view of Kijima et al. (6,259,500 B1) as applied to claims 1-11, 13-21, above, and further in view of Fukuyoshi et al. (6,249,082 B1).

Regarding Claim 12, Yamada teaches an electroluminescence display device (Col. 3, Lines 22,23), comprising: a transparent substrate (Col. 5, Lines 33-43); a plurality of first electrodes formed on the transparent substrate (Col. 5, Lines 44-47); an electroluminescence layer (Col. 5, Lines 34-37) and a plurality of second electrodes (Col. 5, Lines 47-50) sequentially disposed on the first electrodes (Col. 6, Lines 35-49); a packaging plate having a plurality of protrusions formed at a side opposite to the plurality of second electrodes (Col. 5, Lines 44-47, Extends- protrudes); an absorber contained within each protrusion (Col. 1, Lines 35-43, Lines 48-59); a plurality of semi-transparent films disposed on the packaging plate and each absorber; and an adhesive attaching the transparent substrate to the packaging plate to oppose each other (Col. 5, Lines 33-43).

However, Yamada modified by Kijima et al. fails to teach the plurality of semi-transparent films include one of paper and Teflon material

However, Fukuyoshi et al. teaches the plurality of semi-transparent films include one of paper and Teflon material (Col. 22, Lines 4-8, Lines 33,34).

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Fukuyoshi et al. in Yamada modified by Kijima et al. teaching for an electrode plate having transmission /reflection type film in a LCD device (EL device) has an excellent optical characteristic, low electrical connection resistance, good patterning configuration and high stability.

### *Allowable Subject Matter*

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

**an electroluminescence display device, comprising: a transparent substrate; a plurality of first electrodes formed on the transparent substrate; an electroluminescence layer and a plurality of second electrodes sequentially disposed on the first electrodes; a packaging plate having a plurality of protrusions formed at a side opposite to the plurality of second electrodes; an absorber contained within each protrusion; a plurality of semi-transparent films disposed on the packaging plate and each absorber; and an adhesive attaching the transparent substrate to the packaging plate to oppose each other and the plurality of protrusions are formed by bending the packaging plate into a desired shape.**

### *Response to Arguments*

6. Applicant's arguments filed 05-03-2004 have been fully considered but they are not persuasive.

Applicant argues the cited references fails to teach packaging plate having a plurality of protrusions.

Examiner disagrees Yamada teaches packaging plate to insulate EL material made of metal and metal cap is opacity (Col. 5, Lines 33-42). Kijima et al. teaches this packaging plate has protrusion which are circular shape (Col. 11, Lines 16-61, Col. 12, Lines 18-22, Col. 9, Lines 59-64, Col. 1 Line 57 to Col. 2, Line 9).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is informed that all of the other additional cited references either anticipate or render the claims obvious. In order to not to be repetitive and exhaustive, the examiner did draft additional rejection based on those references.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M Dharia whose telephone number is 703-605-1231. The examiner can normally be reached on M-F 8AM to 5PM.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-3054938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

PD

AU2673

May 19, 2004

VIJAY SHANKAR
PRIMARY EXAMINER